

vinculin (h): 293T Lysate: sc-113822

BACKGROUND

Focal adhesions are identified as areas within the plasma membrane of tissue culture cells that adhere tightly to the underlying substrate. *In vivo*, these regions are involved in the adhesion of cells to the extracellular matrix. Paxillin and vinculin are cytoskeletal, focal adhesion proteins that are components of a protein complex which links the Actin network to the plasma membrane. Vinculin binding sites have been identified on other cytoskeletal proteins, including Talin and α -actinin. In addition, vinculin, Talin and α -actinin each contain Actin binding sites. Expression of vinculin and Talin have been shown to be affected by the level of Actin expression. α -actinin has been shown to link Actin to integrins in the plasma membrane through interactions with the vinculin and Talin complex or by a direct interaction with integrin.

REFERENCES

1. Burridge, K., Fath, K., Kelly, T., Nuckolls, G. and Turner, C. 1988. Focal adhesions: transmembrane junctions between the extracellular matrix and the cytoskeleton. *Annu. Rev. Cell Biol.* 4: 487-525.
2. Gilmore, A.P., Jackson, P., Waites, G.T. and Critchley, D.R. 1992. Further characterization of the Talin-binding site in the cytoskeletal protein vinculin. *J. Cell Sci.* 103: 719-731.
3. Wood, C.K., Turner, C.E., Jackson, P. and Critchley, D.R. 1994. Characterisation of the paxillin-binding site and the C-terminal focal adhesion targeting sequence in vinculin. *J. Cell Sci.* 107: 709-717.
4. Gluck, U. and Ben-Ze'ev, A. 1994. Modulation of α -actinin levels affects cell motility and confers tumorigenicity on 3T3 cells. *J. Cell Sci.* 107: 1773-1782.
5. Schevzov, G., Lloyd, C. and Gunning, P. 1995. Impact of Actin gene expression on vinculin, Talin, cell spreading, and motility. *DNA Cell Biol.* 14: 689-700.
6. Gilmore, A.P. and Burridge, K. 1996. Regulation of vinculin binding to Talin and Actin by phosphatidylinositol-4-5-bisphosphate. *Nature* 381: 531-535.
7. Hemmings, L., Rees, D.J., Ohanian, V., Bolton, S.J., Gilmore, A.P., Patel, B., Priddle, H., Trevithick, J.E., Hynes, R.O. and Critchley, D.R. 1996. Talin contains three Actin-binding sites each of which is adjacent to a vinculin-binding site. *J. Cell Sci.* 109: 2715-2726.

CHROMOSOMAL LOCATION

Genetic locus: VCL (human) mapping to 10q22.2.

PRODUCT

vinculin (h): 293T Lysate represents a lysate of human vinculin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

vinculin (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive vinculin antibodies. Recommended use: 10-20 μ l per lane.

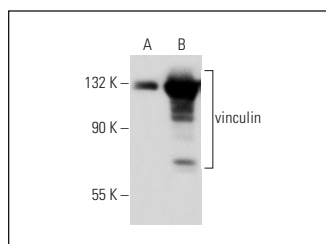
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

vinculin (G-11): sc-55465 is recommended as a positive control antibody for Western Blot analysis of enhanced human vinculin expression in vinculin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

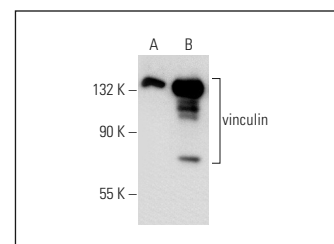
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™
Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



vinculin (G-11): sc-55465. Western blot analysis of vinculin expression in non-transfected: sc-117752 (A) and human vinculin transfected: sc-113822 (B) 293T whole cell lysates.



vinculin (H-10): sc-25336. Western blot analysis of vinculin expression in non-transfected: sc-117752 (A) and human vinculin transfected: sc-113822 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.